

ANTENNA WITH DYNAMICALLY VARIABLE OPERATING BAND

ABSTRACT OF THE INVENTION

An antenna can include at least one antenna element (102) to which a fluid dielectric (114) is magnetically and electrically coupled. The antenna element (102) is preferably a conductive wire or patch disposed on a dielectric substrate (104), but it can also be a slot. A fluid control system (116, 118, 120) can be provided responsive to a control signal (124) for selectively varying a volume of the fluid dielectric (114) coupled to the antenna element (102). Consequently, efficient operation of the antenna element can be provided on a plurality of operating bands.